	Application No.	Applicant(s)	_
	09/846,364	ISHIWATA ET AL.	
Notice of Allowability	Examiner	Art Unit	_
	Karabi Guharay	2879	
The MAILING DATE of this communication apperall claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RI of the Office or upon petition by the applicant. See 37 CFR 1.313	ears on the cover sheet with (OR REMAINS) CLOSED in the or other appropriate communication. This application is substand MPEP 1308.	is application. If not included cation will be mailed in due course. <b>THIS</b>	)
2. X The allowed claim(s) is/are 1-10,21,22,27 and 30-35.			
<ul> <li>3.  ☐ The drawings filed on <u>02 May 2001</u> are accepted by the Ex</li> <li>4.  ☐ Acknowledgment is made of a claim for foreign priority un</li> <li>a) ☐ All b) ☐ Some* c) ☐ None of the:</li> </ul>		f).	
<ol> <li>Certified copies of the priority documents have</li> </ol>			
2. Certified copies of the priority documents have	, ,		
3. Copies of the certified copies of the priority doc	cuments have been received in	this national stage application from the	
International Bureau (PCT Rule 17.2(a)).  * Certified copies not received:			
<ul> <li>5. Acknowledgment is made of a claim for domestic priority ur reference was included in the first sentence of the specification.</li> <li>(a) The translation of the foreign language provisional a</li> <li>6. Acknowledgment is made of a claim for domestic priority ur in the first sentence of the specification or in an Application.</li> </ul>	ation or in an Application Data application has been received. ander 35 U.S.C. §§ 120 and/or	Sheet. 37 CFR 1.78.	
Applicant has THREE MONTHS FROM THE "MAILING DATE" of below. Failure to timely comply will result in ABANDONMENT of			
<ol> <li>A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give</li> </ol>			
<ul> <li>8. CORRECTED DRAWINGS (as "replacement sheets") mus</li> <li>(a) including changes required by the Notice of Draftspers</li> <li>1) hereto or 2) to Paper No.</li> <li>(b) including changes required by the proposed drawing or</li> <li>(c) including changes required by the attached Examiner's</li> </ul>	on's Patent Drawing Review (	as been approved by the Examiner.	
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in the	.84(c)) should be written on the	drawings in the front (not the back) of	
9.   DEPOSIT OF and/or INFORMATION about the deposit attached Examiner's comment regarding REQUIREMENT FOR T			
Attachment(s)			
1☐ Notice of References Cited (PTO-892)	5 ☐ Notice of Inform	nal Patent Application (PTO-152)	
2☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 3☐ Information Disclosure Statements (PTO-1449 or PTO/SB/0 Paper No. <u>filed</u> on 3/10/03		nary (PTO-413), Paper No	
	7⊠ Examiner's Am	endment/Comment	
4☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	8⊠ Examiner's Sta 9⊡ Other	ement of Reasons for Allowance	

## Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/14/03, has been entered.

Amendments, together with the request for RCE, filed on 10/14/03 have been entered.

Claims 11-20, 23-26, 28 and 29 are cancelled.

Claims 1-10, 21, 22 and 27 are amended.

New claims 30-35 are added.

In the title, pursuant to MPEP § 606.01, the title has been changed as follows:

-----ELECTRON SOURCE HAVING AN INSULATING LAYER WITH METAL

OXIDE PARTICLES-----

## Allowable Subject Matter

Claims 1-10, 21-22, 27 and 30-35 are allowed over the prior art of record.

## Reasons for Allowance

The following is an examiner's statement of reason for allowance:

Regarding claim 1, the prior art of record fails to teach or suggest the combination of limitations set forth in claim 1, particularly an electron source comprising the limitation of an insulating material layer provided on a substrate wherein the

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insulating material has a plurality of partially exposed metal oxide particles on its surface and an electron emitting layer and an electrode, connected with the electron emitting material, are disposed on the insulating material.

Regarding claim 2, the prior art of record fails to teach or suggests the combination of limitations set forth in claim 2, particularly an electron source comprising the limitation of an insulating material layer provided on a substrate wherein the insulating material has a plurality of partially exposed metal oxide particles on its surface and a plurality of enclosed metal oxide particles and an electron emitting layer and an electrode, connected with the electron emitting material, are disposed on the insulating material.

Regarding claims 30, 31 and 32, the prior art of record fails to teach or suggests the combination of limitations set forth in claims 30, 31 and 32, particularly comprising an insulating material on a substrate, wherein the insulating layer has a plurality of partially exposed metal oxide particles on its surface and a plurality of enclosed metal oxide particles, and an average particle size of plurality of partially exposed metal oxide particle is larger than an average particle size of the plurality of enclosed metal oxide particles, as in claim 30, or an average size of partially exposed metal oxide particle is in the range 50nm to 70nm wherein an average size of enclosed metal oxide particle is in the range 6nm to 40 nm, as claimed in claim 31, or an average size of enclosed metal oxide particle is in the range 6nm to 40 nm, as claimed in claim 32.

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Claims 3-10, 21-22, 27 and 33-35 are allowed for being dependent on the allowed base claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

## **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (703) 305-1971. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (703) 305-4794. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

K Guharay Karabi Guharay Patent Examiner Art Unit 2879

NIMESHKUMAR D. FATEL
SUPERVISORY PATENT EXAMINATE
TECHNOLOGY CENTER 2800